

# A NEW SPECIES OF *CYCAS* FROM THE NORTHERN TERRITORY

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## Abstract

A new species of cycad from the Northern Territory, *Cycas conferta* is described.

## Introduction

The first account of *Cycas* from the Northern Territory was by Robert Brown (1810) who published two species, *C. media* and *C. angulata*. Another species was added by Miquel in 1863 when he described *C. armstrongii* from material collected near the original settlement of Port Essington.

In 1978 Maconochie added a further species found only in the Northern Territory, *C. calcicola*, a distinctive species with slender, pubescent pinnae with revolute margins. The description of the new species by Maconochie was part of a review of the genus that was never completed due to his untimely death.

This genus often occupies a prominent position in the vegetation of the Northern Territory, and plants have in some instances become a specific tourist attraction. *Cycas conferta* is found in and near Kakadu National Park and it had been recognised by local botanists as different from the described species for several years. The description of this taxon thus continues the taxonomic review of the genus in the Northern Territory initiated by Maconochie.

## *Cycas conferta* Chirgwin, *sp. nov.*

Frutex habitu palmarum ad 3.5 m altus, caudice c. 120 mm diam. Folia aquamarina, 600-1050 mm longa, ad 200 mm lata. Pinnae 120-186, decurrentes in rachi, 94-105 mm longae, 3-8.5 mm late, isobilaterales, glabrae, quoque margine complantae, costa canale centrali, apex mucronatus, spina tortilli ad 1.5 mm. Rhachis hemispherica vel triangularis basi. Petiolus in sectione transversali deltatus, 0 vel 20 spinis, sed plerumque 0, furfuraceus, ferrugineus basi. Strobilus masculus conicus, ad 330 mm longus, 150 mm latus; pedunculus ad 35 mm longus, microsporophyllo deltato ad 25 mm longo, spinis curvatis, ad 12 mm longis, usque ad 6 series microsporophyllorum infertiliium basi. Megasporophylla ferruginea, 120-200 mm longa, apice rhombo, sterili, 20-65 mm longo, cum vel sine dentibus infirmis, spina terminalis, 2-30 mm longa, pedunculus et apex sterilis ferrugineus. Megasporeae 1-4 per sporophyllum (plerumque 2), pyriformes, rostellatae micropyle, purpureo-brunneae ubi maturae, 32-42 mm longae, 20-34 mm diametro.

*Type:* Northern Territory, *G. Brown s.n.*, 21.iv.87, female plant. (holo.: DNA 29214; iso.: SYD).

## Description

Palm-like shrub to 3.5 m high, trunk about 120-130 mm in diameter. Leaves are sea-green, 600 - 1050 mm long and 200 mm wide. Pinnae 120- 186 per leaf, decurrent on the rhachis, 94-104 mm long, 3-8.5 mm wide, isobilateral, glabrous, with flattened margins, midrib with central channel; apex mucronate with twisted spine to 1.5 mm long. Rhachis subspherical to deltoid at the base. Petiole deltoid in transverse section; spines 0-20, but commonly 0, scurfy ferruginous at base. Male cone conical, to 330 mm long and 150 mm wide; peduncle to 35 mm long, microsporophylls deltoid, to 25 mm long with curved spine to 12 mm long; infertile microsporophylls up to 6 rows at base. Megasporophyll ferruginous, 120-200 mm long, with rhombic sterile apex 20-65 mm long, with poorly developed teeth or entire; terminal spine 2 to 30 mm long; peduncle and sterile apex ferruginous. Megaspores 1-4 per sporophyll (commonly

2), pear-shaped, slightly beaked at micropyle, purple-brown when ripe, 32-42 mm long, 20-34 mm in diameter. Fig. 1.



Fig. 1: *C. conferta*

**Distribution:** This species is found in small groups around creek systems in the Pine Creek area, completely isolated from other species of *Cycas*. It occurs in isolated groups in small numbers in and on the edge of Kakadu National Park.

**Etymology:** The specific epithet for this species refers to the crowded nature of the pinnae on the rachis.

**Notes:** Pant & Nautiyal (1963), found that only two species of *Cycas* in thirteen investigated were amphistomatic, viz. *C. comorensis* and *C. micholitzii*. All previously described species from the Northern Territory are hypostomatic, but in *C. conferta* a few scattered stomates can be found either side of the midvein on the upper pinnae surface.

The soft, sea-green coloured leaves of these plants, the crowded, isobilateral pinnae and pear shaped ovules with prominent micropyles are features that readily distinguish this taxon from all other Northern Territory species.

**Conservation status:** The total number of plants in this taxon is small (200-300), and therefore it must be regarded as under significant threat from mining, road making and collectors. 2RC.

#### *Specimens examined*

AUSTRALIA: NORTHERN TERRITORY: Kakadu National Park, S.K. Chirgwin 250 (DNA), male; S.K. Chirgwin 252 (DNA), female; G. Brown (DNA 29215), sex unknown; S.K. Chirgwin 260 (DNA), male; S.K. Chirgwin 264 (DNA), female; S.K. Chirgwin 300 (DNA), sex unknown.

#### References

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